

Remarks

The Applicants have amended all of the claims to place them into better condition for allowance. The substance and scope of the claims remain the same. However, the Applicants have addressed issues of antecedent basis, clarity and arrangement of steps to place the claims into final condition for allowance.

Claim 1 stands objected to because of an extraneous "the" in line three of the originally filed listing of the claims. That extraneous "the" has been removed. Withdrawal of the objection is respectfully requested.

Claim 10 stands rejected under 35 USC §112 as being indefinite with respect to "the support." The Applicants note with appreciation the Examiner's helpful comments concerning antecedent basis. Claim 10 has accordingly been amended. Withdrawal of the rejection is respectfully requested.

Claims 1-14 stand rejected under 35 USC §103 under the hypothetical combination of Mazza with Sakazume. The Applicants note with appreciation the Examiner's detailed comments hypothetically applying the combination against those claims. The Applicants nonetheless respectfully submit that the hypothetical combination would result in methodology that is sharply different from the subject matter of the Applicants' claims. Details are provided below.

Sakazume generally discloses a method and apparatus for separating magnetic particles on which immunocomplexes are bound. The magnetic particles are shaken and oscillated for agitation purposes to wash off unspecifically-bound substances. The objective of the Sakazume method and apparatus is to promote an immunoreaction on the surface of the magnetic particles and reliably and rapidly carry out separation of the target substances. The magnetic field causes rotational and translational movement of the magnetic particles so that they come into contact with each other and form flocks.

The Applicants respectfully submit that such activity and the overall methodology and structure of the Sakazume apparatus provides for the magnetic particles to come into contact with the selective binding substance-immobilized surface. Of equal importance, however, is the failure of Sakazume to disclose, teach or suggest the feature in the Applicants' claims which recite a method of stirring a solution by mixing fine particles or air bubbles without allowing contact of the fine particles or air bubbles with the selective binding substance-immobilized surface of the carrier.


Thus, the Applicants respectfully submit that Sakazume fails to disclose, teach or suggest a specifically recited feature of the Applicants' claims. In fact, the Applicants respectfully submit that the Sakazume methodology and apparatus would indeed cause the magnetic particles to contact the selective binding substance-immobilized surfaces --- which is contrary to what the Applicants claim. On this basis alone, the Applicants respectfully submit that one skilled in the art would not look to Sakazume.

The rejection frankly acknowledges that Sakazume does not expressly disclose the use of a mixing medium such as air. The Applicants agree. Thus, the rejection turns to Mazza to cure this deficiency. The Applicants respectfully submit, however, that even if one skilled in the art were to import the teachings of Mazza with respect to utilizing air into the Sakazume method and apparatus, this importation of air would result in a methodology wherein the air is allowed to come into contact with the selective binding substance. The problem with that portion of the combination is that the Applicants specifically claim that the air bubbles (and fine particles) do not contact the selective binding substance. Thus, even if one skilled in the art were to hypothetically combine Mazza with Sakazume, the resulting methodology would lead one skilled in the art away from the Applicants' claimed methodology wherein the air bubbles do not contact the selective binding surface.

Also, the methodology of Mazza uses an air jet through a nozzle which is different from and not applicable to the Applicants' Claim 1. The air bubbles exist in a solution preliminarily before stirring and the air bubbles are not able to be supplied by an air jet under stirring in the Applicants' Claim 1. Thus, Mazza is essentially unavailable for combination with Sakazume at the outset. In any event, the hypothetical combination would result in a very different methodology which would cause the fine particles or air bubbles to contact the selective binding as claimed. Withdrawal of the rejection is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



T. Daniel Christenbury
Reg. No. 31,750
Attorney for Applicants

TDC/vbm
(215) 656-3381